

REMARKS

Claims 10-22 were previously pending in the application. By the Amendment, Claims 11-20 and 22 are currently amended, Claims 23-25 are added, and Claims 10 and 21 remain unchanged. Reconsideration in view of the above amendments and the following remarks is respectfully requested.

Applicants gratefully acknowledge that claim 16 was not rejected over prior art. Claim 16 has been rewritten in independent form to include all the limitations of the base claim. Therefore, Applicants submit that newly-independent claim 16 is allowable.

The remaining claims stand rejected under the cited prior art of record. Specifically, claims 10-15 were rejected under 35 U.S.C. §102(b) as being anticipated by Tilmanis (U.S. Patent No. 3,839,878).¹ Claims 13, 15, 18 and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Tilmanis. Claims 18 and 19 were rejected under 35 U.S.C. §103(a) over Tilmanis in view of Davis et al. (U.S. Published Patent Application No. 2001/0054292). Claim 10 is indicated as being in conflict with claim 11 of co-pending Application Serial No. 10/551,339.² Claims 10-13 were provisionally rejected on the ground of non-statutory double patenting over claims 11-19 of co-pending Application No. 10/551,339.

¹ Although only claims 10-15 are listed in the statement of grounds of rejection, the Office Action additionally addresses claims 17 and 20-22. Presumably, these claims also should have been listed in the grounds of rejection.

² The Office Action inadvertently referenced Application No. 10/551,561, which is the present application. Applicants assume the Examiner intended to reference Application Serial No. 10/551,339.

Objection of Claim 19

With regard to the objection of claim 19 in paragraph 1 of the Office Action, claim 19 has been amended as suggested by the Examiner. The Examiner's suggestion is acknowledged with appreciation. Withdrawal of the rejection is requested.

Claims 10-15, 17 and 20-22

Independent claim 10 defines a refrigeration device including a thermally insulated housing that encloses an inner chamber and an evaporator arranged in the housing and separated from the inner chamber. The evaporator includes a surface where an ice layer forms during operation. A pair of temperature sensors are placed *in the vicinity* of the evaporator such that for a given thickness of the ice layer, only one of the temperature sensors is embedded in the ice layer. A heating device is provided for heating the evaporator, and a monitoring circuit is connected to the pair of temperature sensors. The monitoring circuit determines the difference (ΔT) between the temperature values detected by the pair of temperature sensors and activates the heating device when the temperature difference exceeds a predetermined value (ΔT_{\max}).

Tilmanis discloses an automatic defrosting system for refrigerators and the like. The system includes two thermistors 36, 38 that serve as temperature sensors. Tilmanis describes that one thermistor 36 is arranged in contact with the coil of the evaporator 18, while the other thermistor 38 is arranged within the frozen food storage chamber 12. See col. 4, lines 17-19.

In contrast with Tilmanis, claim 10 recites that the pair of temperature sensors are placed in the vicinity of the evaporator. In the embodiment illustrated in Fig. 1, for example, the first temperature sensor 12 is attached directly to a surface of the evaporator 7, and the second temperature sensor 14 is arranged in an upper opening 4 from which air cooled in the evaporator chamber 5 flows back to the inner chamber 2. In an alternative embodiment illustrated in Fig. 3,

the temperature sensors are secured on a carrier 15 attached to a surface of the evaporator 7. By providing the temperature sensors in the vicinity of the evaporator, as opposed to inside the storage chamber, a more accurate temperature deviation between the temperature sensors 12, 14 can be detected. By placing the thermistor 38 within the food storage chamber 12 in Tilmanis, the thermistor 38 is more susceptible to temperature variations within the chamber, which is dependent on many factors including, for example, ambient air temperature, ambient air humidity, the frequency with which the refrigerator door is opened, the nature of the goods stored in the chamber, etc. Additionally, by placing the thermistor 38 within the food storage chamber, the thermistor 38 is more susceptible to damage, for example by the user placing goods or impacting the thermistor with goods in the chamber, and/or inaccurate temperature readings, for example, by the user placing a frozen item in direct contact with the thermistor 38.

Applicants thus respectfully submit that Tilmanis lacks at least the claimed pair of temperature sensors placed in the vicinity of the evaporator. Withdrawal of the rejection is thus respectfully requested.

Claim 17 defines an operating method for a refrigeration device. Claim 17 has been amended to define a step of positioning the pair of temperature sensors in the vicinity of the evaporator. With reference to the discussion above concerning claim 10, Applicants submit that at least this subject matter is lacking in Tilmanis. Withdrawal of the rejection is thus respectfully requested.

With regard to dependent claims 11-15 and 20-22, Applicants submit that these claims are allowable at least by virtue of their dependency on an allowable independent claim. In addition, with regard to claims 13 and 15, although these claims are listed in the grounds of rejection, the Office Action does not address these claims in the context of §102(b). The Examiner acknowledges in paragraph 13 that Tilmanis in fact lacks the subject matter of claims 13 and 15.

For this reason also, Applicants submit that the rejection of claims 13 and 15 under §102(b) is misplaced.

Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 13, 15, 18 and 19

Initially, Applicants submit that these dependent claims are allowable at least by virtue of the dependency on an allowable independent claim. In additions, claims 13 and 15 recite that the second one of the temperature sensors is arranged on an output of the channel communicating with the inner chamber. The Office Action contends that "it would have been an obvious mechanical expedient . . . to rearrange the existing parts to place the second temperature sensor on an output of the channel terminating in the inner chamber in order to ensure that the temperature sensed by the second temperature sensor is not rendered inaccurate by proximity to frozen items in the freezer." As discussed above, however, in contrast with the claimed invention, Tilmanis discloses that the second thermistor 38 is arranged within the frozen food storage chamber 12.

Without the benefit of Applicants' own disclosure, Applicants submit that those of ordinary skill in the art would not be led to modify the Tilmanis system as proposed in the Office Action. It is well settled that "obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under §103, teachings of references can be combined only if there is some suggestion or incentive to do so." *ACS Hosp. Systems, Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). Although couched in terms of combining teachings found in the prior art, the same inquiry must be carried out in the context of a purported obvious "modification" of the prior art. "The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggests

the desirability of the modification." *In re Gordon*, 733 F.2d at 902, 221 USPQ at 1127. Nowhere does Tilmanis even remotely suggest the desirability of positioning the second thermistor 38 in the vicinity of the evaporator such as on an output of the channel terminating in the inner chamber as defined in claims 13 and 15. Applicants thus respectfully submit that the rejection of claims 13 and 15 is misplaced.

Although claims 18 and 19 are included in the statement of the grounds of rejection, the Examiner acknowledges in paragraph 15 that Tilmanis in fact lacks the subject matter of claims 18 and 19. Additionally, claims 18 and 19 are not addressed in paragraph 13. Applicants thus submit that the rejection of claims 18 and 19 is also misplaced.

Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 18 and 19

In paragraph 14, claims 18 and 19 are rejected over Tilmanis in view of Davis et al. Without conceding this rejection, Applicants submit that these dependent claims are allowable at least by virtue of their dependency on an allowable independent claim. That is, the Davis publication does not correct the deficiencies noted above with regard to Tilmanis in the context of claim 17. Withdrawal of the rejection is requested.

Claim 10 and U.S. Application No. 10/551,339

With regard to the Office Action's contention that claim 10 of this application conflicts with claim 11 of the noted co-pending application, Applicants respectfully disagree. In contrast with the invention defined in claim 10 of the present application, claim 11 of the co-pending application includes a measuring device arranged in the air passage to provide a measured signal representative of the air flow through the air passage. A control circuit is coupled to the

measuring device air flow signal and activates the heating device when the recorded air flow signal falls below a predetermined threshold value. This distinction represents a clear line of demarcation between the applications. Withdrawal of the rejection is thus respectfully requested.

Claims 10-13 – Non-Statutory Double Patenting

Without conceding this rejection, filed concurrently herewith is a Terminal Disclaimer disclaiming the term of a patent granted on this application that would extend beyond that of the noted co-pending application. Withdrawal of the rejection is requested.

New Claims 23-25

Claims 23-25 have been added. Claims 23 recites that the second one of the temperature sensors is disposed adjacent a ventilator positioned between the evaporator and the inner chamber. Support for this amendment can be found in the specification at, for example, page 6, lines 4-6 and FIG. 1. Claim 24 recites that neither of the temperature sensors is disposed in the inner chamber. Support for this amendment can be found in the drawings. Finally, claim 25m which depends from method claim 17, recites that step a) is practiced by positioning a first one of the temperature sensors directly on the surface of the evaporator and positioning a second one of the temperature sensors adjacent a ventilator positioned between the evaporator and the inner chamber. At least these additional feature of the invention are lacking in the references of record.

CONCLUSION

In view of the above, entry of the present Amendment and allowance of Claims 10-25 are respectfully requested. If the Examiner has any questions regarding this amendment, the Examiner is requested to contact the undersigned. If an extension of time for this paper is required, petition for extension is herewith made.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'J. Howard', is written above the printed name.

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